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Self-Confidence in Mathematics: Voices of Indonesian Junior High Students

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ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi self-confidence siswa SMP dalam pembelajaran matematika, sebagai faktor afektif yang memengaruhi partisipasi, motivasi, dan kemampuan pemecahan masalah. Sebagian besar penelitian sebelumnya menggunakan pendekatan kuantitatif, sehingga belum banyak mengungkap bagaimana self-confidence tercermin dalam perilaku nyata di kelas. Dengan pendekatan kualitatif deskriptif, data dikumpulkan dari 32 siswa kelas VIII di salah satu SMP negeri di Garut melalui angket skala sikap dan wawancara semi-terstruktur. Empat indikator yang dikaji yaitu keyakinan terhadap kemampuan diri, kemandirian, konsep diri positif, dan keberanian mengemukakan pendapat. Hasil menunjukkan bahwa self-confidence siswa tergolong kuat (71%), dengan skor tertinggi pada konsep diri positif (77%) dan terendah pada kemandirian (66%). Namun, wawancara menunjukkan bahwa siswa masih ragu dalam mengungkapkan pendapat dan mengambil keputusan. Penelitian ini merekomendasikan lingkungan kelas yang suportif agar siswa dapat mengekspresikan kepercayaan dirinya secara konsisten.

Kata Kunci: Kepercayaan diri; Matematika; Pembelajaran; *Self-confidence;* Siswa SMP

ABSTRACT

This study examines junior high school students' self-confidence in mathematics learning, a key affective factor influencing their participation, motivation, and problem-solving abilities. Most previous studies have used quantitative methods, leaving a gap in understanding how self-confidence manifests in real classroom behaviour. Using a descriptive qualitative design, data were collected from 32 eighth-grade students at a public school in Garut, Indonesia, through attitude scale questionnaires and semi-structured interviews. Four indicators were examined: belief in one's abilities, independence, positive self-concept, and courage to express opinions. Results showed students' self-confidence was generally strong (71%), with the highest score in positive self-concept (77%) and the lowest in independence (66%). However, interviews revealed that students often hesitated to express their opinions and make decisions. These findings suggest a gap between self-perception and behaviour. The study recommends creating supportive classroom environments to help students consistently demonstrate their confidence.

Keywords: Junior high school students; Learning; Mathematics; Self-confidence

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1. INTRODUCTION

Mathematics is one of the essential subjects in school curricula. It not only aims to develop students' logical and critical thinking skills but also requires affective readiness, one of which is self-confidence (Efwan et al., 2024). In junior high school mathematics learning, students' self-confidence often becomes a barrier to active participation and academic achievement. Students with low self-confidence tend to be passive, hesitant to ask questions when they do not understand the material, and afraid to present or solve problems openly in class (Isyana et al., 2024; Oktarisa et al., 2024). This phenomenon impacts not only academic performance but also the development of students' personality and independence throughout the learning process. A lack of self-confidence, reliance on peers, and a tendency to avoid academic responsibilities are common patterns observed in the field (Jumrah et al., 2022; Fitayanti et al., 2022).

From a psychological perspective, self-confidence is understood as a positive attitude individuals hold toward themselves, characterised by the belief that they are capable of completing tasks and facing challenges effectively (Lauster in Hendriana et al., 2017; Faturohman, Iswara, & Gozali, 2022). This attitude encompasses the ability to make independent decisions, take responsibility for one's actions, and maintain a positive outlook toward learning success. Individuals with high self-confidence generally exhibit self-assured, independent behaviour, possess a positive self-concept, and are not easily discouraged when encountering obstacles (Blegur, 2020; Monalisa et al., 2024). In the context of mathematics education, students' self-confidence is strongly correlated with their engagement in classroom discussions, willingness to express opinions, and motivation to solve complex problems.

Numerous prior studies have highlighted the central role of self-confidence in mathematics learning. Pitria and Kurnia (2022), used a quantitative approach to reveal that self-confidence has a significant influence on students' mathematical creative thinking abilities. Their findings emphasize that fostering self-confidence can encourage students to explore ideas and strategies more courageously in solving mathematical problems creatively. In line with this, Khoirunnisa and Malasari (2021), conducted an exploratory qualitative study, which showed that students with high self-confidence fulfil more indicators of mathematical critical thinking than those with moderate or low confidence. Confident students tend to be more reflective, capable of analyzing information accurately, and decisive when solving challenging mathematical tasks.

The role of self-confidence is also evident in the context of mathematical problem-solving (Dalilan & Sofyan, 2022; Gunawan et al., 2024; Indrajaya et al., 2025). Awalia (2023) found that the combination of the Problem-Based Learning (PBL) model and increased self-

confidence significantly improved students' problem-solving abilities. Students with high self-confidence are more actively engaged in learning (Rosmawati & Sritresna, 2021; Afriansyah et al., 2024), capable of developing effective problem-solving strategies, and not afraid to try alternative approaches. Furthermore, Robiah and Nuraeni (2023), used regression analysis to show that self-confidence contributes 87.5% to students' mathematical communication skills. Their findings illustrate that confident students can communicate their mathematical ideas both symbolically and verbally, although expressing opinions remains the lowest-performing indicator. Similarly, Melyana and Pujiastuti (2020) confirmed that self-confidence has a significant influence on students' critical thinking skills, contributing 57.3%. They observed that confident students are more capable of developing solution strategies and making logical decisions when facing mathematical problems.

Overall, these findings imply that self-confidence is a highly influential non-cognitive variable in mathematics learning, particularly in the domains of creative and critical thinking, mathematical communication, and problem-solving (Ulfa & Sundayana, 2022; Maulandani & Afriansyah, 2024). Therefore, fostering students' self-confidence must be an integral part of efforts to improve the quality of mathematics education at the junior high school level.

Although previous studies have demonstrated the positive impact of self-confidence on cognitive aspects of mathematics learning, further research is needed to understand how confidence levels are reflected in students' actual behaviour and learning experiences (Nuraeni & Afriansyah, 2021; Hapsoh & Sofyan, 2022). Most previous studies have used quantitative methods, which often fail to capture the holistic affective dynamics of students (Disparrilla & Afriansyah, 2022). In this regard, qualitative research is essential for exploring how students internalise and express self-confidence in everyday learning contexts, including decision-making, sharing opinions, and responding to mathematical learning challenges. Based on this rationale, the present study offers a fresh perspective by qualitatively examining how junior high school students experience and exhibit self-confidence during mathematics learning. Rather than relying solely on numerical data from quantitative approaches, this study explores students' narratives, emotions, and decision-making processes as they engage with mathematical tasks. By combining attitude scale questionnaires with semi-structured interviews, the study aims to provide a more comprehensive and nuanced portrayal of students' self-confidence, particularly as it manifests in real classroom situations. This approach not only addresses gaps in previous research but also offers practical insights for designing learning environments that optimally support students' affective development.

Grounded in this rationale, the present study aims to describe and analyse the level of junior high school students' self-confidence in learning mathematics using a qualitative method through questionnaires and interviews. This research is expected to provide deeper

insights into the role of self-confidence in mathematics learning and serve as a foundation for designing inclusive learning strategies that support students' optimal affective development.

2. METHOD

This study employed a descriptive qualitative approach aimed at portraying students' levels of self-confidence in mathematics learning. This approach was selected as it allows researchers to gain an in-depth, contextual understanding of students' attitudes, perceptions, and experiences. The participants consisted of 32 eighth-grade students from one class at SMP Negeri 1 Kadungora, Garut Regency, West Java, Indonesia. The school is situated in a semi-urban area and serves students from diverse socioeconomic backgrounds, including children of farmers, civil servants, traders, and factory workers. The learning environment is moderately resourced, with a focus on character education and active student participation. These contextual factors were considered important in interpreting students' affective traits, such as self-confidence. All students were involved as respondents in completing the questionnaire and served as the initial source of information to represent the classroom dynamics in mathematics learning.

Data were collected using two types of instruments: an attitude scale questionnaire and a semi-structured interview guide. The questionnaire was developed based on four main indicators of self-confidence as proposed by Hendriana et al. (2017): (1) belief in one's abilities, (2) independence in decision-making, (3) having a positive self-concept, and (4) courage to express opinions. Eight statements, totalling 32 items, represented each indicator. Each indicator included four positive and four negative statements, which were randomly arranged to avoid sequence bias. A 4-point Likert scale was used: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD), with negative statements scored inversely. Each item had a maximum score of 4 points, resulting in a maximum total score per indicator of $32 \times 8 \times 4 = 1024$ points.

After the questionnaire was completed, the researchers conducted semi-structured interviews with five students selected purposively, regardless of their questionnaire results. The selection was based on the variation of student characteristics observed during informal interactions throughout data collection. Two female students (Respondents 2 & 4) volunteered to participate. Two male students (Respondents 3 & 5) were chosen based on their uncertain expressions and body language, which were indicative of low self-confidence. An additional female student (Respondent 1) was selected for displaying active and enthusiastic responses during engagement with the researcher. This purposive sampling aimed to capture a range of perspectives on self-confidence from both expressive and more passive students. The interview guide consisted of 12 open-ended questions, with three questions assigned to each of the self-

confidence indicators. The interviews were conducted in a relaxed and informal atmosphere to encourage openness and authenticity in students' responses regarding their experiences and feelings in mathematics learning.

Although the study adopted a qualitative descriptive approach, quantitative data from the questionnaire were used to support the findings through simple descriptive statistical analysis. The questionnaire data were analysed quantitatively by calculating the percentage of student responses for each item using the formula:

$$P = \frac{f}{n} \times 100\%$$

where P represents the percentage of student responses, f is the number of students selecting a particular option, and n is the total number of respondents (32 students). Then, the average percentage per indicator was calculated using the following formula:

$$\overline{P_i} = \frac{\sum_{j=1}^{k} P_j}{k}$$

where $\overline{P_i}$ is the average percentage for the i-th indicator, P_j is the percentage of the j-th item, and k is the number of items per indicator (in this case, k = 8). To obtain an overall picture of students' self-confidence levels, the total average percentage was calculated using:

$$\bar{P}_{Total} = \frac{\sum_{i=1}^{4} \overline{P_i}}{4}$$

The results were interpreted using the following classification criteria adapted from Sugiyono (2011, p.137):

Table 1. Criteria Category Interpretation Percentage Self-confidence

Percentage (%)	Interpretation Category
0-20	Very Weak
21-40	Weak
41-60	Fair
61-80	Strong
81-100	Very Srong

Meanwhile, data from the interviews were analysed thematically using qualitative techniques, including data reduction, categorisation based on indicators, identification of emerging patterns, and concluding. This analysis aimed to enrich and complement the questionnaire findings, providing deeper insights into students' subjective experiences of expressing self-confidence during mathematics learning. The research instruments used in this study (the attitude scale questionnaire and the semi-structured interview guide) were reviewed and validated by an expert in mathematics education with substantial experience in qualitative research. As a result, no pilot testing was conducted prior to data collection. In terms of

research ethics, permission to conduct the study was obtained from the school, which serves as the institutional authority. Additionally, informed consent was secured from all student participants. All participants were informed about the purpose of the study and their right to withdraw at any stage without any consequences. Anonymity and confidentiality of responses were also strictly maintained throughout the data collection and analysis process.

This research design aimed to provide a comprehensive overview of students' self-confidence in mathematics learning, illustrating how confidence is manifested, developed, and expressed in real classroom situations.

3. RESULT AND DISCUSSION

This section presents the findings obtained from both the attitude scale questionnaire and the semi-structured interviews conducted with the students. The data are analysed based on the four key indicators of self-confidence: belief in one's abilities, independence in decision-making, positive self-concept, and courage to express opinions. Each indicator is discussed in detail using descriptive statistics supported by narrative interpretations and direct quotes from student interviews to provide a deeper understanding of their self-confidence in the context of mathematics learning.

a. Result

In this study, the self-confidence questionnaire data collected from all participants were analysed using percentage formulas to determine the students' confidence levels for each indicator. The interpretation of the questionnaire results was based on the classification criteria for self-confidence levels according to Sugiyono (2011).

Meanwhile, interview data were analysed thematically to explore the meaning behind students' responses, strengthen the questionnaire results, and provide a deeper understanding of students' experiences, perceptions, and attitudes regarding self-confidence in mathematics learning. The research findings are presented systematically based on the four self-confidence indicators: (1) belief in one's abilities, (2) independence in decision-making, (3) having a positive self-concept, and (4) courage to express opinions. Each indicator is presented through a narrative of the questionnaire results, accompanied by selected interview quotes to support and clarify the findings.

The first indicator of students' self-confidence in mathematics learning is their belief in their abilities. This indicator reflects students' attitudes in facing math problems, their willingness to solve problems independently, and their persistence despite difficulties or failure.

Based on the questionnaire analysis, a total score of 710 was obtained from eight items, with an average score of 88.75 and a percentage of 69%, categorised as "Strong."

This indicates that most students have a relatively high level of confidence in their abilities when facing challenges in learning mathematics.

This finding is supported by interview responses from five students, which show variation in how they perceive their abilities. For example, Respondent 1 stated:

"*When I get a difficult math problem, I usually try to solve it on my own first. But if I still have trouble, I wait for help from the teacher.*"

Similarly, Respondent 2 shared:

"*I will try to solve it by myself first before seeking help.*"

These statements indicate an internal drive to utilize their own abilities before relying on external support. However, not all students showed stable self-confidence. Respondent 3 noted:

"*I feel less confident in math because my scores are often below the passing grade.*"

Respondent 5 added:

"*I once felt confident in solving a problem by myself, but the result was disappointing, which made me anxious and frustrated.*"

Despite such experiences, some students demonstrated persistence and motivation. Respondent 4 shared:

"*Although I felt disappointed, I used the experience as motivation to keep learning and improve myself.*"

From these excerpts, it can be inferred that while the majority of students demonstrate belief in their abilities, a few still experience doubt, especially when facing academic challenges or unsatisfactory outcomes. Nonetheless, optimism and the willingness to keep trying remain strong traits across student responses.

The second indicator of self-confidence is independence in decision-making, reflecting students' ability to organise learning strategies, choose problem-solving approaches, and overcome learning difficulties without relying on others. This independence is essential for fostering responsibility and initiative in mathematics learning.

The questionnaire data yielded a total score of 676 across eight items, with an average of 84.5 and a percentage of 66%, which is categorised as "Strong." This suggests that most students are relatively independent in making decisions when learning mathematics.

This is reinforced by interview data, which revealed that most students are accustomed to selecting their learning strategies and responding independently to learning difficulties. For instance, Respondent 2 explained:

"*When studying math at home, I use my own method, mainly by practicing a lot.*"

Respondent 3 mentioned:

"*I watch learning videos online and try to work on problems to improve my understanding.*"

Even when the teacher' s explanation was lacking, students made efforts to understand the material. Respondent 4 said:

"*I review my notes and discuss with friends to gain additional perspectives*."

Likewise, Respondent 5 stated:

"*If the teacher doesn' t explain the material clearly, I try to understand it by looking it up online*."

Nevertheless, some students still showed hesitation. Respondent 1 admitted:

"*When I don' t understand something, I wait for help from the teacher*."

This suggests that while students aim for independence, some still depend on external support when faced with confusion or difficulty. Although independent efforts may not always yield the desired outcomes, most students expressed pride in trying. Respondent 2 shared:

"*The results vary, sometimes satisfying, sometimes not. But I' m proud of trying my best*."

Respondent 3 added:

"*Sometimes the result meets expectations, which makes me proud, but sometimes it doesn' t*."

Thus, this indicator shows that most students have developed a tendency toward independence in mathematics learning, both in choosing strategies and addressing challenges. However, teaching methods that encourage exploration, personal decision-making, and responsibility should be continuously enhanced to further strengthen this independence.

Among the four indicators, independence in decision-making received the lowest average score (66%), suggesting that while students show a willingness to solve problems, many still hesitate to make academic decisions without external validation. This was reflected in several interview responses. For example, Respondent 1 admitted:

"*When i don' t understand something, i wait for help from the teacher.*"

Indicating a tendency to rely on teacher guidance rather than exploring solutions independently. Similarly, Respondent 4 mentioned:

"*I review my notes and discuss with friends.*"

Highlighting dependence on peer input when facing challenges. These patterns suggest that students may lack confidence in their ability to choose effective learning strategies independently, especially when the material becomes complex or unfamiliar.

The third self-confidence indicator is having a positive self-concept, which reflects how students realistically assess their abilities, strengths, and weaknesses. Students with a positive self-concept can recognise their strengths and limitations, do not give up easily when failing, and remain motivated to grow.

The questionnaire results for this indicator showed a total score of 784, an average of 98, and a percentage of 77%, categorised as "Strong." This was the highest percentage among the four indicators, indicating that students generally possess a positive self-perception in the context of mathematics learning.

Interview responses support this finding. Respondent 4 stated:

"*I'm good at multiplication and addition, but I still struggle with division*."

Respondent 1 also mentioned:

"*I'm pretty confident with basic calculations like addition, subtraction, and multiplication, but I feel less confident with division*."

These statements reflect not only awareness of their abilities but also a willingness to acknowledge areas for improvement without excessive self-criticism.

Regarding responses to failure or low scores, students generally showed a positive attitude. Respondent 2 said:

"*I feel motivated to study harder and improve my grades*."

Respondent 5 shared:

"*Although I sometimes feel disappointed, it motivates me to keep learning and improve my skills*."

Students also displayed healthy coping mechanisms when dealing with stress or disappointment. Respondent 3 noted:

"*I prefer to stay quiet and keep it to myself, while still trying to get better*."

Respondent 2 showed emotional openness:

"*I often share my feelings with my parents as a form of emotional support*."

These findings indicate that most students have developed mature self-awareness in evaluating their math abilities. They do not easily succumb to frustration; instead, they use setbacks as motivation. Realistic self-acceptance is a crucial foundation for sustained self-confidence.

The fourth indicator is courage to express opinions, which reflects students' confidence in sharing ideas, asking or answering questions in class, and participating in group discussions. This ability is essential for 21st-century learning, which emphasises communication, collaboration, and active engagement.

According to the questionnaire results, this indicator scored a total of 738, with an average of 92.25 and a percentage of 72%, classified as "Strong." This indicates that students generally have high confidence in expressing their opinions, although some face internal or social barriers.

Interviews revealed varying levels of comfort in speaking up in class or during group discussions. Some students felt comfortable and enthusiastic about speaking, while others expressed hesitation due to fear of being wrong or receiving negative feedback. Respondent 2 stated:

"*I feel comfortable asking or answering in class. I have strong confidence and don't feel embarrassed, even if my answer might be incorrect*."

Respondent 1 echoed:

"*I'm confident when I need to ask or answer questions in class. I don't feel embarrassed when giving an answer*."

This confidence also extended to group discussions. Respondent 3 shared:

"*In group discussions, I immediately share my ideas, even if I'm sometimes afraid they're not correct*."

However, some students showed anxiety when speaking in public. Respondent 5 confessed:

"*I feel uncomfortable asking or answering in class because I often feel shy and lack confidence*."

Respondent 4 described social dynamics that hindered participation:

"*Sometimes I feel uncomfortable because classmates say things like, 'Why are you always the one speaking up?' That makes me feel awkward, even if I want to participate*."

Interestingly, some students developed strategies to manage their hesitation, such as discussing ideas with peers beforehand. As Respondent 4 noted:

"*I usually discuss my ideas with a friend first to confirm if they're valid because I'm worried, they might be wrong*."

These findings show that although most students are confident in expressing their opinions, internal factors and external factors can occasionally hinder their verbal expression. Therefore, teachers must continue fostering a psychologically safe and supportive classroom environment to encourage students' active participation.

Based on the analysis of both the questionnaire and in-depth interviews with five respondents, an overall portrait of students' self-confidence in mathematics learning emerged. In general, all four indicators fell under the "Strong" category, with an overall average score of 90.875 and a percentage of 71%. A summary of each indicator is presented in the table below:

Table 2. Recapitulation of Percentage and Interpretation of Each Self-confidence Indicator

No	Indicator	No. of Items	Total Score	Average Score	Percentage	Interpretation
1	Belief in one's abilities	8	710	88.75	69%	Strong
2	Independence in decision-making	8	676	84.5	66%	Strong
3	Positive self-concept	8	784	98	77%	Strong
4	Courage to express opinions	8	738	92.25	72%	Strong
Total		**32**	**2908**	**90.87**	**71%**	**Strong**

To illustrate the relative contribution of each indicator to students' overall self-confidence, a bar chart was developed based on the percentage distribution from the total indicator score (2908), as shown in Figure 1.

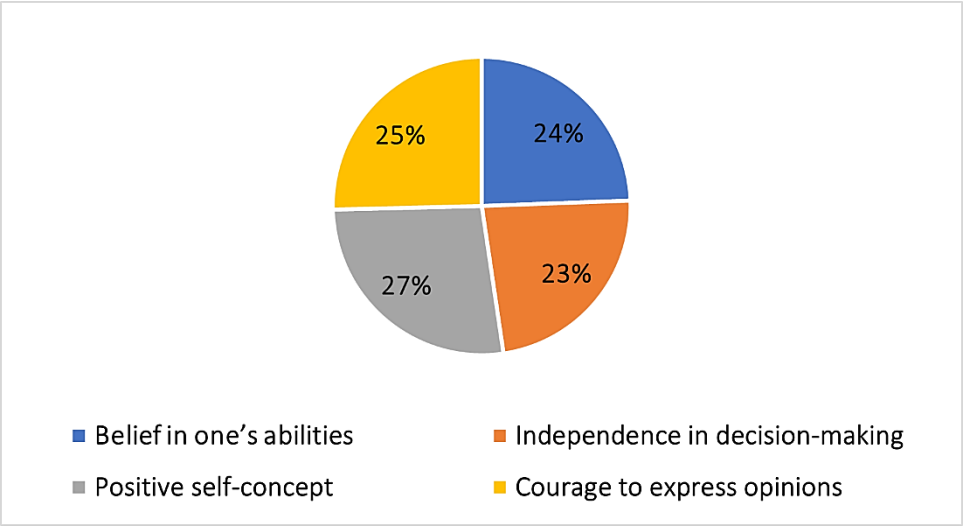

Figure 1. Relative Contribution of Each Student Self-Confidence Indicator

Based on the chart, it can be concluded that students can assess their abilities positively and are open to recognising both strengths and weaknesses. Furthermore, the courage to express opinions is relatively high. However, the independence aspect still needs further encouragement, particularly in making learning decisions and choosing problem-solving strategies independently.

These findings suggest that the current mathematics learning environment supports the development of students' self-confidence. However, further reinforcement is needed in certain areas, particularly through collaborative, reflective, and exploratory learning approaches.

b. Discussion

The findings of this study show that the level of students' self-confidence in mathematics learning falls under the "strong" category across all four investigated indicators: belief in one's abilities, independence in decision-making, having a positive self-concept, and courage to express opinions. These four aspects are interrelated and, taken together, indicate that most students possess a relatively solid foundation of self-confidence in navigating the mathematics learning process. However, each indicator has its characteristics and challenges that require further analysis.

The belief in one's abilities indicator shows that most students have confidence in their ability to solve math problems independently. This attitude is reflected in students' tendency to try solving problems on their own before asking for help from teachers or peers. This finding aligns with Awalia's (2023) study, which found that self-confidence has a significant impact on students' mathematical problem-solving abilities. In this context, the willingness to try and persist through complex problems is a manifestation of one's own

belief in abilities, which forms the basis for developing effective learning strategies. This is also supported by Melyana and Pujiastuti (2020), who found that students with high self-confidence tend to be more flexible and creative in thinking and can make independent decisions in solving mathematical problems. Thus, confidence in one' s abilities plays a crucial role in fostering independent learning, effective problem-solving strategies, and resilience in the face of academic challenges.

The independence in decision-making indicator demonstrates that students are capable of choosing learning strategies and finding alternative solutions when facing difficulties. Although most students fall into the "strong" category, interviews revealed that some students are not yet fully confident in making their own decisions without validation from teachers or peers. This finding is consistent with Melyana and Pujiastuti (2020), who emphasised that self-confidence positively correlates with critical thinking skills, particularly in the aspect of independent and reflective decision-making. Awalia' s (2023) research also supports this, showing that self-confidence helps students develop independent problem-solving strategies without relying heavily on teacher direction. Furthermore, Khoirunnisa and Malasari (2021) found that students with moderate or low self-confidence are less likely to make independent decisions and exhibit fewer indicators of critical thinking. Therefore, although a tendency toward independence has formed, further reinforcement is still necessary to help students become more confident in making academic decisions without relying on external dependence.

The indicator with the highest score in this study is having a positive self-concept. Most students demonstrated a realistic perception of their strengths and weaknesses in learning mathematics, along with an optimistic attitude toward self-development. Interview findings showed that students were able to identify both their areas of strength and those requiring improvement, while still maintaining the motivation to improve. This is in line with Khoirunnisa and Malasari (2021), who stated that students with high self-confidence tend to have a positive self-perception, which supports their engagement in critical thinking and their ability to view mistakes as part of the learning process. Melyana and Pujiastuti (2020) also noted that a healthy self-concept allows students to be more confident, unafraid of making mistakes, and open to different approaches. A supportive learning environment, teacher appreciation of student efforts, and positive social interactions also contribute to the development of a positive self-concept. Therefore, it is crucial for teachers and schools to continuously foster a positive and inclusive learning climate to support the optimal development of students' self-concept.

Meanwhile, the indicator of courage to express opinions also showed a relatively high score. However, students still face some challenges, especially related to social pressure and the fear of making mistakes. Some students expressed discomfort when speaking in front of

the class due to fear of being laughed at or receiving negative comments from peers. This finding supports the study by Robiah and Nuraeni (2023), which found that while students demonstrated proficiency in using mathematical symbols and notation, the courage to express opinions remained the weakest aspect of mathematical communication. In mathematics learning, the courage to speak up not only reflects confidence but also reinforces critical thinking and active engagement. Awalia (2023) also emphasised that self-confidence fosters active participation in problem-based learning, where speaking and expressing opinions are integral to the collaborative learning process. Therefore, students' courage to express their ideas must be continuously supported by creating a nonjudgmental and supportive classroom environment. Appreciating students' efforts and acknowledging their courage to speak—regardless of whether the answer is correct—is a crucial step in cultivating a healthy communication culture and fostering stable self-confidence.

Interestingly, while the quantitative results in this study indicate that students generally possess strong self-confidence across all four indicators, the interview data reveal a more nuanced picture. Several students expressed hesitation, emotional discomfort, and reliance on teachers or peers when faced with challenges, particularly in decision-making and public expression. This discrepancy suggests that students may overestimate their confidence in self-reported questionnaires or struggle to consistently manifest it in real classroom situations. Similar findings were reported by Wahyuni, Juniati, and Wijayanti (2024), who combined quantitative and qualitative data to investigate the impact of self-confidence and math anxiety on problem-solving. In their study, students who scored high on self-confidence questionnaires but experienced math anxiety during tasks tended to perform inconsistently and avoid verifying their answers. This highlights the importance of not interpreting quantitative data in isolation and reinforces the need to understand students' affective dynamics through multiple lenses. Qualitative insights provide valuable context that reveals hidden insecurities that may not be readily apparent in standardised measures.

4. CONCLUSION

Based on the findings of this study on the self-confidence levels of eighth-grade students in mathematics learning at SMP Negeri 1 Kadungora, it can be concluded that, in general, students' self-confidence falls into the "strong" category. This indicates that the majority of students have developed a sufficient level of confidence to face the mathematics learning process, both cognitively and affectively. The indicator "having a positive self-concept" achieved the highest score, indicating that students can realistically assess their abilities, accept their limitations with an open attitude, and remain motivated to grow. The "courage to express opinions" was also relatively strong, although still influenced by social

factors such as peer pressure. The "belief in one's abilities" reflects students' willingness to solve problems independently before seeking help. At the same time, the "independence in decision-making" indicator shows that some students are capable of determining their learning strategies, although others still rely on validation from teachers or peers.

Self-confidence is a crucial factor in the development of critical thinking, problem-solving, mathematical communication, and decision-making skills in the learning process. However, interview findings also revealed that this confidence is not always consistently expressed in classroom situations, particularly in making independent decisions or expressing opinions under pressure. Theoretically, this study contributes to a deeper understanding of self-confidence as a multidimensional construct involving both internal perceptions and external behaviours. Practically, the findings suggest that teachers can support students' confidence not only by encouraging but also through structured opportunities for decision-making, emotional expression, and reflective learning experiences in the mathematics classroom. In line with these findings, efforts to foster students' self-confidence should include activities such as guided group discussions, low-stakes presentations, and consistent positive reinforcement to help students develop and consistently demonstrate self-confidence.

Future research is encouraged to include a larger and more diverse sample, encompassing a wider range of educational levels, school environments, and instructional approaches. Further studies could also employ mixed-methods approaches or longitudinal designs to capture the dynamic development of students' self-confidence over time.

BIBLIOGRAPHY

Afriansyah, E. A., Nurjamilah, E., Sumartini, T. S., Hamdani, N. A., & Maulani, G. A. F. (2024, November). Students Mathematical Understanding of Social Arithmetic in Terms of Student Self-Efficacy. In *4th International Conference on Education and Technology (ICETECH 2023)* (pp. 691-708). Atlantis Press.

Awalia, N. (2023). Model Problem Based Learning terhadap Kemampuan Pemecahan Masalah Matematis Siswa. *Plusminus: Jurnal Pendidikan Matematika*, *3*(2), 277 – 288. https://doi.org/10.31980/plusminus.v3i2.1343

Blegur, J. (2020). *Soft Skills untuk Prestasi Belajar: Disiplin Percaya diri Konsep diri akademik Penetapan tujuan Tanggung jawab Komitmen Kontrol diri*. Scopindo Media Pustaka. https://books.google.co.id/books?id=mDvPDwAAQBAJ

Dalilan, R., & Sofyan, D. (2022). Kemampuan Berpikir Kreatif Matematis Siswa SMP ditinjau dari Self Confidence. *Plusminus: Jurnal Pendidikan Matematika*, *2*(1), 141-150. https://doi.org/10.31980/plusminus.v2i1.1092

Disparrilla, Y. N., & Afriansyah, E. A. (2022). Analisis kemampuan pemecahan masalah matematis dan self-efficacy siswa pada materi SPLDV. *SIGMA: Jurnal Pendidikan Matematika*, *14*(2), 148-161.

Efwan, N. S., Afriansyah, E. A., Luritawaty, I. P., Arwadi, F., & Yadav, D. K. (2024). The Level of students' mathematical creative thinking skills as measured by their self-confidence. *International Journal of Didactic Mathematics in Distance Education*, *1*(2), 125-136.

Faturohman, I., Iswara, E., & Gozali, S. M. (2022). Self-Confidence Matematika Siswa dalam Penerapan Pembelajaran Online. *Mosharafa: Jurnal Pendidikan Matematika*, *11*(1), 85-94. https://doi.org/10.31980/mosharafa.v11i1.689

Fitayanti, N., Rahmawati, A., & Asriningsih, T. M. (2022). Pengaruh Self-Confidence Terhadap Kemampuan Pemecahan Masalah Matematika Siswa. *JPMI (Jurnal Pembelajaran Matematika Inovatif)*, *5*(2), 335. https://doi.org/10.22460/jpmi.v5i2.9678

Gunawan, G., Ferdianto, F., Untarti, R., & Akhsani, L. (2024). Student Profile of Mathematical Communication Process of Prospective Mathematics Teachers Reviewed from Self-Confidence. *Mosharafa: Jurnal Pendidikan Matematika*, *13*(4), 1019-1034.

Hapsoh, & Sofyan, D. (2022). Kemampuan komunikasi matematis dan self-confidence siswa pada materi sistem persamaan linear tiga variabel di desa sukaresmi. *Jurnal Inovasi Pembelajaran Matematika: PowerMathEdu*, *1*(2), 139-148. https://doi.org/10.31980/pme.v1i2.1384

Hendriana, H., Rohaeti, E. E., & Sumarmo, U. (2017). Hard skills dan soft skills matematik siswa. *Bandung: Refika Aditama*, *7*, 2017.

Indrajaya, U., Sadiah, S., Sundayana, R., & Puspitasari, N. (2025). Scratch vs Excel: Enhancing Math Problem-Solving and Student Confidence. *Plusminus: Jurnal Pendidikan Matematika*, *5*(1), 91-104. https://doi.org/10.31980/plusminus.v5i1.2556

Isyana, B. V., Baidowi, Novitasari, D., & Sridana, N. (2024). Pengaruh Self Confidence Terhadap Hasil Belajar Matematika Siswa Kelas VIII SMP. *Mandalika Mathematics and Educations Journal*, *6*(1), 370 – 383. https://doi.org/10.29303/jm.v6i1.7125

Jumrah, Anggriani, S., & Hardiyanti, S. (2022). Pengaruh Self-Confidence terhadap Hasil Belajar Matematika Siswa. *Al-Irsyad Journal of Mathematics Education*, *1*(2), 88 – 94. https://doi.org/10.58917/ijme.v1i2.25

Khoirunnisa, P. H., & Malasari, P. N. (2021). Analisis kemampuan berpikir kritis matematis siswa ditinjau dari self confidence. *JP3M (Jurnal Penelitian Pendidikan dan Pengajaran Matematika)*, *7*(1), 49 – 56. https://doi.org/10.37058/jp3m.v7i1.2804

Maulandani, S., & Afriansyah, E. A. (2024). Mathematical Reasoning Skills Review of Student Self-Regulated Learning in Number Pattern. *Plusminus: Jurnal Pendidikan Matematika*, *4*(1), 27-46.

Melyana, A., & Pujiastuti, H. (2020). Pengaruh Kepercayaan Diri Terhadap Kemampuan Berpikir Kritis Matematis Siswa Smp. *JPMI (Jurnal Pembelajaran Matematika Inovatif)*, *3*(3), 239-246.

Monalisa, L. A., Kristiana, A. I., Wihardjo, E., Hussen, S., & Putri, F. A. (2024). The Correlation of Junior High School Students' Self-Confidence and Mathematical Problem-Solving Ability. *Mosharafa: Jurnal Pendidikan Matematika*, *13*(4), 1097-1108. https://doi.org/10.31980/mosharafa.v13i4.1692

Nuraeni, K., & Afriansyah, E. A. (2021). Perbedaan kemampuan komunikasi matematis dan self confidence siswa antara tps dan stad. *SIGMA: Jurnal Pendidikan Matematika*, *13*(1), 33-40.

Oktarisa, F., Rahmat, T., & Firmanti, P. (2024). Pengaruh Self Confidence Terhadap Hasil Belajar Matematika. *INNOVATIVE : Journal Of Social Science Research*, *4*, 5532 – 5543.

Pitria, N., & Kurnia, L. (2022). Pengaruh Self-Concept dan Self-Confidence Terhadap Kemampuan Berfikir Kreatif Matematis Siswa. *Edusainstika: Jurnal Pembelajaran MIPA*, *2*(1), 6-15.

Robiah, S., & Nuraeni, R. (2023). Pengaruh kepercayaan diri terhadap kemampuan komunikasi matematis siswa mts pada materi himpunan. *PowerMathEdu : Jurnal Inovasi Pembelajaran Matematika*:, *2*(2), 215 – 228. https://doi.org/10.31980/pme.v2i2.1423

Rosmawati, R. R., & Sritresna, T. (2021). Kemampuan pemahaman konsep matematis ditinjau dari self-confidence siswa pada materi aljabar dengan menggunakan pembelajaran daring. *Plusminus: Jurnal Pendidikan Matematika*, *1*(2), 275-290. https://doi.org/10.31980/plusminus.v1i2.901

Sugiyono. (2011). *Metode Penelitian Pendidikan*. Abeta.

Ulfa, N. C. A., & Sundayana, R. (2022). Kemampuan representasi matematis siswa pada materi bilangan berdasarkan self-confidence. *Jurnal Inovasi Pembelajaran Matematika: PowerMathEdu*, *1*(2), 193-200. https://doi.org/10.31980/pme.v1i2.1389

Wahyuni,R., Juniati, D., & Wijayanti, P. (2024). How do math anxiety and self-confidence affect mathematical problem solving? *TEM Journal, 13*(1), 129-136. https://doi.org/10.18421/TEM131-58

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